BROOKHAVEN NATIONAL LABORATORY

INTERAGENCY AGREEMENT

ANNUAL SCHEDULES UPDATE/REPORT

FOR

SITE REMOVAL AND REMEDIAL ACTIONS

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November 2021

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1.0 INTRODUCTION

Long Term Stewardship (LTS) activities under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) are being conducted at Brookhaven National Laboratory (BNL) under an Interagency Agreement (IAG) among the U. S. Department of Energy (DOE), the United States Environmental Protection Agency Region II (EPA), and the New York State Department of Environmental Conservation (NYSDEC). The IAG is also referred to as the Federal Facility Agreement (FFA) under CERCLA Section 120 (Administrative Docket Number: II-CERCLA-FFA-00201). Subpart I under Section XVII of the FFA, Project Schedules and Deadlines, requires DOE to submit a revised schedule which will provide deadlines for draft primary documents and target dates for secondary documents for those Operable Units (OUs) scheduled to begin in the following two fiscal years. This document identifies the current schedule for each OU and Removal Action Area of Concern (AOC) identified to date, scheduled to be initiated or continued in Fiscal Year (FY) 2022 or FY 2023.

The BNL Response Strategy Document (RSD), January 1992, grouped the 24 then known AOCs into seven OUs and four Removal Actions. Details on the BNL site and the 24 AOCs comprising the removal and Remedial Actions (RAs) are documented in the BNL Site Baseline Report (SBR), January 1992.

Since then, 10 additional AOCs and several Sub-AOCs have been added: AOC 25 (Building 479), AOC 26 (Building 208), AOC 27 (Building 464 Area Mercury Contaminated Soils), AOC 28 (Ethylene dibromide (EDB) Groundwater Contamination), AOC 29 (Spent Fuel Pool in High Flux Beam Reactor [HFBR] and Associated Groundwater Plume of Tritium), AOC 9D (Brookhaven Graphite Research Reactor [BGRR] Pile Fan Sump), AOC 16T (g-2), AOC 30 (Peconic River), AOC 31 (HFBR), AOC 32 (Building 452 Freon-11 Plume) and AOC 1J (Hazardous Waste Management Facility Perimeter Area). In February 2021, DOE identified two new AOCs (AOCs 33 and 34) for perfluorooctane sulfonate (PFOS)/perfluorooctanoic acid (PFOA) and 1,4-dioxane, as well as new OU VIII. Area of Concern 33 includes nine Sub-AOCs.

As agreed to by DOE, EPA and NYSDEC, any changes in OU structure (meaning the BNL Response Strategy) will be described in the Annual Schedules Update/Report as opposed to periodic updates to the RSD. The following reprioritization and restructuring of the OUs have been agreed upon by the IAG agencies:

- The evaluation of remedial alternatives for the OU II/VII AOCs is included under the OU I Feasibility Study (FS). Radiologically contaminated soils from Operable Units I, II/VII and IV are addressed in the Operable Unit I Record of Decision (ROD) to ensure that all these soils are addressed in a consistent manner.

- Volatile Organic Compound (VOC) groundwater contamination on BNL property associated with the Current Landfill and Former Hazardous Waste Management Facility (FHWMF) is documented under the OU I ROD.

- Groundwater contamination outside BNL property associated with OU I AOCs and groundwater on BNL property associated with OU II/VII AOCs are addressed in the OU

III ROD as part of a comprehensive approach to clean up contaminated groundwater. However, groundwater remediation associated with OU VI is distinct and is documented under the OU VI ROD.

- The Peconic River (AOC 30) was separated from the Record of Decision process from the Sewage Treatment Plant (AOC 4), Sewer Lines (AOC 21), and Eastern Off-site Tritium Plume (AOC 23). The ROD for the Sewage Treatment Plant, Sewer Lines and Eastern Off-site Tritium Plume was finalized in January 2002.

- The cleanup of Peconic River sediment on BNL property was performed under an Action Memorandum that was issued in January 2004 and was completed in September 2004. The sediment cleanup outside BNL property was performed under an Action Memorandum that was approved in September 2004, and the cleanup was completed in May 2005. The final ROD for the Peconic River cleanup was finalized in January 2005.

- An area of radiologically contaminated soil along the eastern boundary of the FHWMF, AOC 1, was left in-place so that it could be used as a waste staging and railcar loading area (Waste Loading Area). The Waste Loading Area (WLA) was administratively transferred to the HFBR scope of work. The remediation of this area was performed as a non-time-critical removal action authorized by the *Action Memorandum, High Flux Beam Reactor, Removal Action for Waste Loading Area*, in October 2007. In February 2009, AOC 31, comprising the HFBR complex and the WLA was established. The cleanup of the WLA was completed and documented in *Final Completion Report, High Flux Beam Reactor, Area of Concern 31, Soil Remediation, July 2009.*

- Cleanup of the FHWMF Perimeter Area Phase I, II, and III soils were performed as a non-time-critical removal action authorized by the *Action Memorandum, Removal of Contaminated Soil from the Former Hazardous Waste Management Facility Perimeter Area* (June 2009). This area is included under the OU I ROD.

- DOE addressed the final remedy for AOC 12 (Eight USTs), AOC 16K (Aerial Radioactive Monitoring System Results, BLIP, Building 931B), and AOC 16T (G-2 source area and tritium groundwater plume) in one ROD that was finalized in May 2007.

The following changes to the RODs, as documented in ESDs, have been approved by the IAG agencies:

- 2005 OU III ESD - The change describes the final remedy selected for the Magothy aquifer, the changes proposed for the on-site cleanup of strontium-90 contaminated groundwater including additional time to meet the cleanup goals, and the resolution of no further action for the Building 96 geophysical anomalies.

- 2009 OU III ESD – The change describes the planned source area excavation and off-site disposal of VOC-contaminated soil at the former Building 96 area, which will also help optimize the existing groundwater pump and treat system.

- 2012 OU III ESD – The change describes the addition of one new extraction well, and the use of an existing extraction well to remediate the newly identified Freon-11 groundwater contamination.

- 2012 BGRR ESD – The change describes how the biological shield wall, which was originally intended to be removed to three feet below the BGRR floor level, was removed to floor level.

Table 1-1 lists the 34 BNL AOCs and 71 sub-AOCs. Table 1-2 lists the OUs and Removal Actions. This prioritization is a result of decisions made by DOE during the budget formulation and baseline update processes. The projects were reviewed based on evaluation criteria such as mission, environmental and human health risks, compliance/legal, social/ cultural/economic, worker safety, and management experience and judgment. It is important to note that the priority ranking is dynamic and is subject to change based on many factors such as stakeholder involvement, characterization results, and changing liabilities.

Section 2 discusses the general scheduling aspects and assumptions, which were factored into the DOE proposed schedules. Section 3 presents the proposed schedules for the OUs and Removal Actions AOCs. Proposed schedule dates to conduct the planned work for each OU and Removal Action AOC have been identified. Milestones were developed for primary and secondary documents scheduled for submittal in FY 2022 and FY 2023. The scheduling of OUs and Removal Action AOCs are in accordance with the requirements outlined in the FFA, Part XVII, Subpart I.

The decommissioning of the BGRR was carried out as a remedial action under CERCLA. The BGRR ROD was finalized in March 2005. Remedial activities associated with the graphite pile removal project were completed in May 2010. Installation of the engineered cap and removal of the biological shield were completed in June 2011 and May 2012, respectively. An ESD to the BGRR ROD was issued in June 2012 and identifies the differences in the final remedy for removal of the biological shield. Implementation of the BGRR decommissioning project is now complete. The BGRR is currently in a surveillance and maintenance (S&M) mode.

The decommissioning of the HFBR is being carried out as a remedial action under CERCLA. The HFBR ROD was finalized in April 2009. The final remedy documented in the HFBR ROD incorporated many completed interim actions including the cleanup of the WLA; and removal and disposal of the control rod blades and beam plugs. The HFBR is currently in a S&M mode. Physical removal of the HFBR stack was completed in February 2021 with submittal of the draft Closeout Report to the regulators scheduled for December 2021. The ROD also requires the removal of the remaining structures, components, and confinement building within 65 years (by 2072) following the safe storage (radiological decay) period.

Using American Recovery and Reinvestment Act (ARRA) funding ($70.8 million), DOE accelerated a number of environmental cleanup projects, including the removal of the graphite pile and the biological shield from the BGRR and the installation of the engineered cap and monitoring system, completion of several near-term actions associated with the decommissioning of the HFBR (dismantling of the remaining ancillary structures; removal of

contaminated underground ducts and piping; and preparation of the confinement building for long-term safe storage up to 65 years), and the remediation of contaminated soils from the FHWMF Perimeter Area.

During remediation of the FWHMF Perimeter Area, additional areas of contamination were found in the vicinity. The characterization/remediation of some of these areas was completed in 2010 and was focused on the area slated to be used for the Long Island Solar Farm (LISF). The work was documented in the *Final Completion Report, Former Hazardous Waste Management Facility Perimeter Area Soil Remediation, April 2010.* Additional discrete areas of soil contamination within the Perimeter Area that were not previously addressed were investigated and remediated in September 2014, under the OU I ROD. The Addendum to the *Final Completion Report, Former Hazardous Waste Management Facility Perimeter Area Soil Remediation* was completed in February 2015 to document this last phase of the cleanup.

Starting in 2014 and continuing into 2018, demolition of the former Waste Concentration Facility (AOC 10) Buildings 810 and 811 was performed, as well as excavation of radiological contaminated soil and concrete. Additional details are provided in Section 3.2.

TABLE 1-1 Brookhaven National Laboratory Areas of Concern		
AOC	**Sub AOC**	**Title**
1		**Hazardous Waste Management Facility**
	1A	Open Burning/Detonation Area (SWMU 42)
	1B	Spray Aeration Site
	1C	Salvage Storage Areas (Boneyard) (SWMU 43)
	1D	HWMF Fields (Boneyard) (SWMU 57)
	1E	Drum Rinsing Area (SWMU 55)
	1F	Radioactive material (Fission Product) Injection Site
	1G	Miscellaneous Spill Sites
	1H	Oil-Water Separator (SWMU 56)
	1I	Neutralization Tank and Area (SWMU 4)
	1J	Perimeter Area
2		**Former Landfill Area**
	2A	Former Landfill (SWMU 58)
	2B	Chemical/Animal Pits (SWMU 59)
	2C	Glass Holes (SWMU 60)
	2D	Interim Dump (SWMU 62)
	2E	Slit Trench (SWMU 61)
	2F	Ash Pit (SWMU 66)
3		**Current Landfill (SWMU 48)**
4		**Sewage Treatment Plant**
	4A	Sludge Drying Beds (SWMU 46)
	4B	Sand Filters (SWMU 47)
	4C	Imhoff Tank Sludge (SWMU 74)
	4D	Holdup Ponds (SWMU 73)
	4E	Satellite Disposal Area (SWMU 65)
5		**Central Steam Facility**
	5A	1977 Oil/Solvent Spill (SWMU 68)
	5B	Former Leaching Pit (SWMU 69)
	5C	Underground Piping (SWMU 81)
	5D	CSF Fuel Unloading Areas (SWMUs 26-37)
6		**Reclamation Facility Building 650 Sump**
7		**Paint Shop (Building 244) (SWMU 49)**
8		**Upland Recharge Area/Meadow Marsh (SWMU 88)**

TABLE 1-1 Brookhaven National Laboratory Areas of Concern		
AOC	**Sub AOC**	**Title**
9		**Brookhaven Graphite Research Reactor**
	9A	Canal
	9B	Underground Duct Work
	9C	Spill Sites
	9D	Pile Fan Sump
10		**Waste Concentration Facility (Building 811)**
	10A	Tank D-1, D-2, D-3
	10B	Underground Pipelines
	10C	Six A/B USTs
11		**Building 830 Pipe Leak (SWMU 91)**
12		**Underground Storage Tanks (Tanks 445 (1) and (2); 462, 463 (1) and (2); 527; 650 (1), (2), (3), and (4); 703; 830 (1) and (2); 927; and 931) (SWMU 77)**
13		**Cesspools (Buildings 51, T-122, 197, 244, 348, 422, 444, 449, 452, 555, 624, 902, 905, 914, 919, 919A, 919B, 926, 935, 940, 945, 945 (trailer), and 975) (SWMU 78)**
14		**Bubble Chamber Spill Areas (SWMU 75)**
15		**Supply/Potable Wells**
	15A	Potable/Supply Wells 1, 2, 3, 4, 6, 7, 10, 11, and 12
	15B	Monitoring Well 130-02
16		**Aerial Radioactive Monitoring System Results**
	16A	Alternating Gradient Synchrotron Storage Area
	16B	Warehouse near Building 196
	16C	Warehouse Area, Space Effects Research Lab Magnets
	16D	Accelerator Storage
	16E	Field behind Medical Building
	16F	Field behind Chemistry Building
	16G	Field east of Brookhaven Center
	16H	Decontamination and Hot Laundry
	16I	South end of LINAC, Building 930
	16J	CLIF, Building 931A
	16K	BLIP, Building 931B
	16L	Peconic River Station M, flow Gate Measurement Device plus sedimentation due to bend in stream
	16M	AD Beam Components Assembly Facility, Extraction Magnet Repair Facility Building 914

TABLE 1-1 Brookhaven National Laboratory Areas of Concern		
AOC	**Sub AOC**	**Title**
	16N	Trailers north of Building 919A, Cryogenic Target Assembly Building, Service Area Adjacent to Gate 3 of Fast Beam Tunnel
	16O	Helium Systems Compressor Room, North Conjunction Area Used for Beam Pipe Modification, Building 919
	16P	On-Line Data Facility, Experimental Area Operations, Hot Magnet Storage Area, Building 912
	16Q	Trailers north and east of Building 912, Storage Area for Surplus Steel Shielding
	16R	Nuclear Waste Management Facility, Radioactive Waste Research Program and High-Intensity Rad Lab, Building 830
	16S	Contaminated Landscaping Soil (Including stockpiled soil adjacent to current landfill)
	16T	G-2 source area and tritium groundwater plume
17		**Area Adjacent to Former Low-Mass Criticality Facility**
18		**AGS Scrapyard (Boneyard)**
19		**TCE Spill Area, Building T-111 (SWMU 79)**
20		**Particle Beam Dump, north end of Linear Accelerator (SWMU 76)**
21		**Leaking Sewer Pipes (SWMU 80)**
22		**Old Firehouse (Soil Remediation Project) (SWMU 92)**
23		**Off-site Tritium Plumes (southern and eastern)**
24		**Process Supply Wells 104 and 105**
	24A	Process Supply Wells 104 and 105
	24B	Recharge Basin (Outfall 004) (SWMU 84)
	24C	Recharge Basin HN, Outfall 002 (SWMU 82)
	24D	Recharge Basin HO, Outfall 003 (SWMU 83)
	24E	Recharge Basin HS, Outfall 005 (SWMU 85)
	24F	New Storm Water Runoff Recharge Basin (SWMU 87)
25		**Building 479 (SWMU 50)**
26		**Warehouse Area**
	26A	Building 208
	26B	Former Scrapyard/Drum Storage Area South of Building 96
27		**Building 464 Area Mercury Contaminated Soil**
28		**EDB Groundwater Contamination**

TABLE 1-1 Brookhaven National Laboratory Areas of Concern		
AOC	**Sub AOC**	**Title**
29		**HFBR Spent Fuel Pool and Tritium Plume**
30		**Peconic River**
31		**HFBR**
32		**Building 452 Freon-11 Source Area and Groundwater Plume**
33		**Perfluorooctane Sulfonate (PFOS) and Perfluorooctanoic Acid (PFOA) Groundwater and Soil Contamination**
	33A	Former Bubble Chamber Experiment and Blockhouse Area
	33B	Building 924 Area
	33C	East of Building 902
	33D	Current Firehouse
	33E	Former Firehouse
	33F	Major Petroleum Facility
	33G	Building 526 Area
	33H	Recreation Center Area
	33I	Sewage Treatment Plant
34		**1,4-Dioxane Groundwater Contamination**

SWMU – Solid Waste Management Unit

TABLE 1-2 Brookhaven National Laboratory Priorities for Operable Units (OUs)/Removal Action AOCs (Listed in Descending Order of Relative Priority)		
Category	**AOC #**	**Description**
Operable Unit VIII (**No ROD**) PFAS Time Critical Removal Action	AOC 33D & E	PFOS and PFOA in Groundwater at Current and Former Firehouse – **Under Construction**
Operable Unit V – Peconic River **(ROD approved)**	AOC 30	Peconic River **– Cleanup on BNL Property Complete; Cleanup Outside BNL Property Complete; Supplemental Sediment Removal Complete 2011; Supplemental Sediment Removal at Area WC-06 Complete in 2017.**
Operable Unit II/VII **(Addressed in OU I and g-2/BLIP/USTs RODs; Approved)**	AOC 10A,B,C	Waste Concentration Facility (Building 811) **– Complete (Building Removed 2015; Supplemental Soil Removal Complete in 2016; North Area Soil Strip Remediated in 2018, Completion Report Approved 2019).**
Operable Unit III Accelerated Action		Accelerated Groundwater Treatment Action (Volatile Organic Groundwater contamination near the southwest boundary) **– Treatment System Operating (System Modification Completed 2019)**
Operable Unit III Tritium Removal Action	AOC 29	HFBR Spent Fuel Pool and Tritium Plume – **Treatment System was Shut Down and Placed on Standby in 2013. Petition for Closure Approved 2019.**
Operable Unit III Off-site Removal		High VOC Concentration Portion of the Plume in the Industrial Park South of BNL**– Treatment System was Shut Down and Placed on Standby in 2017. New Treatment System Began Operation in Early 2015 to Capture Deep VOCs, then Placed in Standby 7/2019.**
Operable Unit III (ROD Approved) Operable Unit III **(ROD approved)**	AOC 7 AOC 9 AOC 10 AOC 11 AOC 12 AOC14 Sub AOC 15A Sub AOC 15B AOC 18 AOC 19	Paint Shop **– Groundwater Monitoring Underway** BGRR (groundwater) **– Treatment System Operating** Waste Concentration Facility (groundwater) **– Treatment System Operating** Building 830 Pipe Leak **– Complete, Groundwater Monitoring Underway** USTs – **Complete for Building 830 1 and 2 Tanks** Bubble Chamber Spill Areas **– Groundwater Monitoring Underway** Supply/Potable Wells 1, 2, 3, 4, 6, 7, 10, 11, 12 – **Groundwater Monitoring Underway** Monitoring Well 130-02**– Treatment System Operating (System Modification Completed 2019)** AGS Scrapyard (groundwater) **– Groundwater Monitoring Underway** TCE Spill Area, Building T-111 **– Groundwater Monitoring Underway**

TABLE 1-2 Brookhaven National Laboratory Priorities for Operable Units (OUs)/Removal Action AOCs (Listed in Descending Order of Relative Priority)		
Category	**AOC #**	**Description**
Operable Unit III (Continued) **(ROD approved)**	AOC 20	Particle Beam Dump, North End of Linear Accelerator (Includes Basin HT) – **Monitor and Maintain per SPDES Permit and Natural Resource Management Plan**
	AOC 21	Leaking Sewer Pipes (sitewide, not investigated under other OU study areas) **– Groundwater Monitoring Underway**
	AOC 22	Old Firehouse **– No Further Action Per ROD**
	Sub AOC 24A	Process Supply Wells 104 and 105 **– Treatment Systems Operating, Groundwater Monitoring Underway**
	Sub AOC 24B	Recharge Basin HP, Outfall 004 **– Monitor and Maintain per SPDES Permit & Natural Resource Management Plan**
	Sub AOC 24C	Recharge Basin HN, Outfall 002 **– Monitor and Maintain per SPDES Permit & Natural Resource Management Plan**
	AOC 25	Building 479 (groundwater) **– Groundwater Monitoring Underway**
	AOC 26A	Building 208 (groundwater) **- Groundwater Monitoring Underway**
	AOC 26B	Former Scrapyard/Drum Storage Area South of Building 96 **– Treatment System Operating (Modification Completed 2008); Soil Cleanup Completed 2010**
	AOC 27	Building 464 (groundwater) **– Groundwater Monitoring Underway**
	AOC 32	Building 452 Freon-11 Source Area and Groundwater Plume – **Treatment System was Shut Down and Placed on Standby in 2016. Petition for Closure Approved 2019.**
Operable Unit VI **(ROD approved)**	AOC 28	EDB Groundwater contamination **– Treatment System Operating**
g-2/BLIP/USTs (**ROD Approved**)	AOC 12	Underground Storage Tanks (for 8 USTs – Buildings 462 1 Tank, 463 1 and 2 Tanks, Building 527 1 Tank, Building 703 1 Tank, 927 1 Tank, and 931B 1 and 2 Tanks) - **Complete**
	AOC 16K	BLIP, Building 931B – **Cap Maintenance and Groundwater Monitoring Underway**
	AOC 16T	G-2 Source Area and Tritium Groundwater Plume – **Cap Maintenance and Groundwater Monitoring Underway**
HFBR (ROD **Approved**)	AOC 31	Waste Loading Area **– Complete** Control Rod Blades and Beam Plugs **– Complete** Building 801-811 Waste Transfer Lines – **Complete** HFBR Stabilization – **Complete** Fan Houses (Buildings 704 and 802) – **Complete**

TABLE 1-2 Brookhaven National Laboratory Priorities for Operable Units (OUs)/Removal Action AOCs (Listed in Descending Order of Relative Priority)		
Category	**AOC #**	**Description**
HFBR (Continued) (HFBR ROD **Approved)**		Underground Utilities – **Complete** Stack Silencer – **Complete** Stack **– Demolition Complete 2021**; **Closeout Report Being Prepared for Regulator Review** Reactor Vessel & Components – **To be Removed by 2072**
BGRR **(ROD Approved)**	AOC 9 AOC 9 AOC 9A AOC 9A AOC 9B AOC 9C AOC 9D	Graphite Pile **– Complete** Biological Shield – **Complete; Closeout Report Approved** Engineered Cap **– Complete; Closeout Report Approved; Surveillance and Maintenance Ongoing** Canal **– Complete** Underground Duct Work **– Complete** Spill Sites **– Complete** Pile Fan Sump **– Complete**
Operable Unit I **(ROD approved)**	AOC 1 AOC 2 AOC 3 AOC 6 AOC 8 AOC 12 AOC 23 Sub AOC 24E Sub AOC 24F Sub AOC 1J	Hazardous Waste Management Facility **– Complete, Sr-90 Groundwater Monitoring Underway** Former Landfill Area **– Cap Complete, Surveillance and Maintenance Ongoing** Current Landfill **– Cap Complete, Surveillance and Maintenance Ongoing** Bldgs. 650 Sump and Sump Outfall – **Complete, Sr-90 Groundwater Monitoring Underway (Building Demolition Completed June 2021; Closeout Report Being Prepared)** Upland Recharge Area/Meadow Marsh – **Complete** USTs – **Complete for Building 445 1 and 2 Tanks** Off-site Tritium Plume (southern component) **- Complete** Recharge Basin HS, Outfall 005 **– Complete** New Stormwater Runoff Recharge Basin **- Complete** FHWMF Perimeter Area – **Phase I, II, and III Complete**
Operable Unit II/VII **(Addressed in OU I and g-2/BLIP/USTs RODs: Approved)**	AOC 16 AOC 16R AOC 17 AOC 18 AOC 20	Aerial Radioactive Monitoring System Results **– Complete** Building 830 (Covered under AOC 11 and AOC 12**) – Complete** Area Adjacent to Former Low-Mass Criticality Facility **– Complete** AGS Scrapyard (Boneyard) **– Complete** Particle Beam Dump, North End of Linear Accelerator **– Complete**
Operable Unit IV **(ROD approved)**	AOC 5 AOC 6 AOC 12	Central Steam Facility – **Treatment System Decommissioned** Reclamation Facility Interim Action – **Complete** USTs – **Complete for Building 650 1,2,3, and 4 Tanks**

TABLE 1-2 Brookhaven National Laboratory Priorities for Operable Units (OUs)/Removal Action AOCs (Listed in Descending Order of Relative Priority)		
Category	**AOC #**	**Description**
	AOC 21 Sub AOC 24D	Leaking Sewer Pipes (in study area) – **Complete** Recharge Basin HO, Outfall 003 – **Complete**
Operable Unit V - STP **(ROD approved)**	AOC 4 AOC 21 AOC 23	Sewage Treatment Plant – **Complete** Leaking Sewer Pipes (in the study area) **- Complete** Off-site Tritium Plume (eastern component) **– Groundwater Monitoring Complete**
Removal Action	AOC 1B	Spray Aeration Site – **Complete**
Removal Action	AOC 2 and 3	Landfills Closure – **Complete**
Removal Action	AOC 13	Cesspools – **Complete**
Removal Action	AOC 10A	Waste Concentration Facility – Tank D-1, D-2, and D-3 – **Complete**
Removal Action	AOC 12	Underground Storage Tanks **- Complete**
Removal Action	AOC 26	Building 208 – **Complete**
Removal Action	AOC 27	Building 464 Area Mercury Contaminated Soil – **Complete**
Removal Action	AOC 25	Building 479 – **Complete**
Removal Action	AOC 9D	Pile Fan Sump – **Complete**
Removal Action	AOC 30	Peconic River Sediment on BNL Property – **Complete**
Removal Action	AOC 1J	FHWMF Perimeter Area – **Phase I, II, and III Complete**

2.0 COMMON SCHEDULE CONSIDERATIONS

The proposed schedules were developed using the FFA and EPA Guidelines regarding RI/FS projects and removal or remedial actions. These schedules are based on a basic understanding of the amount of effort involved for each OU and Removal Action AOC. These proposed schedules may change or become more defined based on developments incurred during each effort. In addition, DOE will submit a revised schedule for RI/FS projects and remedial actions by November 30 of each year, which will provide deadlines for draft primary documents and target dates for secondary documents for those OUs scheduled to begin in the following two fiscal years.

2.1 DOCUMENT REVIEW

Document review involves both primary and secondary document considerations:

Primary Document Review

- BNL/DOE Internal Review/Revision
- 30-day EPA/NYSDEC Review of Draft
- 30-day DOE Submittal of Draft Final and written response
- After 30 days of re-submittal to EPA/NYSDEC, document becomes final (if there are no disputes)

Secondary Document Review

- BNL/DOE Internal Review/Revision
- 30-day EPA/NYSDEC Review of Draft
- 30-day DOE written response

The EPA, NYSDEC, and DOE can request 30-day extensions which, when approved, would automatically extend the various milestones.

2.2 RI/FS ACTIVITIES FOR OUs

All OUs have undergone the RI/FS process except for recently identified OU VIII. The proposed schedules for each OU to be initiated or to be continued in FY22 or FY23 include the initiation of work, the final schedules and deadlines for the submittal of draft primary documents, and the target dates for the submittal of the associated secondary documents (FFA Part XVII, Subpart I).

These FFA documents are as follows (FFA Part XV, Subparts C.2 & D.2):

Primary Documents

- RI/FS Work Plans, including the Sampling and Analysis Plans (SAPs);
- Remedial Investigation/Risk Assessment (RI/RA) Reports;
- Feasibility Study (FS) Reports;

- Proposed Remedial Action Plans;
- Records of Decision (ROD);
- Remedial Design (RD) Work Plans (if necessary);
- Remedial Action (RA) Work Plans (if necessary);

Secondary Documents

- Remedial Investigation (RI) SOW;
- Treatability Studies (if necessary);
- Preliminary RDs (if necessary);
- Closeout Reports (if necessary);

The RI/FS process involves:

- Initiation of Work: notify EPA & NYSDEC;
- Remedial Investigation SOW/secondary review;
- RI/FS Work Plan/primary review includes: SAP, Quality Assurance Program Plan (QAPP), and a Health & Safety Plan (HSP);
- Public Comment and Meeting and/or Poster Sessions;
- Remedial Investigation Field Work: notify EPA/NYSDEC 30 days in advance of sample collection; within 45 days of availability of Quality Assurance (QA) data, the QA data must be submitted to EPA (FFA Part XXIV, Subparts E & F);
- Remedial Investigation/Risk Assessment Report/primary review (FFA Part XII);
- Feasibility Study Report/primary review (FFA Part XIII);
- Treatability Studies (if necessary)/secondary review;
  Proposed Remedial Action Plan/primary review (FFA Part XIV);
- Public Comment (FFA Part XIV);
- DOE prepares Responsiveness Summary (FFA Part XIV);
- Record of Decision/primary review (FFA Part XIV): all AOCs will be documented in a ROD (FFA Part X, Subpart E.2g);
- Issue ROD to Administrative Record;
- ROD changes, as necessary.

If the ROD specifies that further remedial action is needed, then the Remedial Design/Remedial Action (RD/RA) effort will be implemented. In that case, DOE shall propose project schedules and deadlines for completion of the following draft primary documents within 30 days of issuance of any ROD (FFA Part XVII, Subparts L-N):

- Remedial Design Work Plan/primary review (FFA Part XIV);
- Remedial Action Work Plan/primary review (FFA Part XIV).

In addition, the following secondary documents will be prepared:

- Preliminary RD (if necessary)/secondary review;
- Closeout Report (if necessary)/secondary review.

2.3 REMOVAL ACTION ACTIVITIES FOR AOCs

Any Removal Action initiated or continued in FY22 or FY23 will have proposed schedules developed for the submittal of an Engineering Evaluation/Cost Analysis (EE/CA) for review and comment, for commencement of response action, and for submittal of the Completion Report.

The Removal Action process involves:

- Initiation of Work;
- Sampling and Analysis Plan (if necessary);
- Preliminary Field Investigation (if necessary);
- EE/CA for non-time critical removal actions;
- Public Comment;
- Action Memorandum: must be at EPA/NYSDEC no less than 45 days before Removal Action begins (FFA Part XI, Subpart B.3). All activities related to ongoing Removal Actions shall be reported by DOE in the progress reports as described in FFA Part XXI-Reporting (FFA Part XI, Subpart B.4);
- Initiate Removal Action;
- Completion Report/Closeout Reports: If EPA and NYSDEC determine that no further response action is necessary or that no response action will be necessary, EPA shall inform DOE in writing that no further response action is required for that AOC. The Completion Report on which the determination has been made shall be documented in a ROD (FFA Part X, Subpart E.2a).

2.4 NEPA INTEGRATION ACTIVITIES

It is DOE policy to integrate the procedural and documentation requirements of NEPA with CERCLA requirements. As recommended in the DOE Secretarial Policy on the National Environmental Policy Act, dated June 1994, the CERCLA process will address all NEPA concerns such as early public involvement in the CERCLA process, and an analysis of cumulative, off-site, ecological, and socioeconomic impacts to the extent practicable. As a result, an Environmental Assessment will not be conducted in addition to the FS Report or EE/CA.

2.5 OTHER FFA NON-SCHEDULED ACTIVITIES

In addition to the proposed schedule items covered in this report, project managers shall meet approximately every 60 days, except as otherwise agreed by the parties, to review and discuss the progress of work being performed at the site on the primary and secondary documents. Prior to preparing any draft document specified in FFA Part XV, Subparts C and D, the project managers shall meet to discuss the document contents in an effort to reach a common understanding, to the maximum extent practicable, with respect to the contents to be presented in the draft document (FFA Part XV, Subpart E).

For those primary documents or secondary documents that consist of or include Applicable or Relevant and Appropriate Requirement (ARAR) determinations, prior to the issuance of a draft document, the project managers shall meet to identify and propose, to the best of their ability, all potential ARARs pertinent to the document being addressed (Part XV, Subpart F). The FFA

specifies that ARAR identification is necessarily an iterative process and that potential ARARs must be re-examined throughout the RI/FS process until a ROD is issued.

Within 30 days of identification of additional OUs, DOE shall propose a deadline for submittal of the RI SOW and the RI Work Plan (FFA Part XVII, Subpart K).

2.6 ASSUMPTIONS

Specific assumptions have been made to develop the schedules given in Section 3:

- Secondary documents as noted in the schedules are prepared.
- Dispute Resolution (FFA Part XV, Subpart H) is not invoked.
- Fieldwork is not controlled by season.
- All laboratory analysis results are received by BNL within 90 days of sample collection.
- The Responsiveness Summary is not a separate document and will be included in the ROD.
- The DOE reviews encompass all appropriate branches (e.g., Brookhaven Site Office, HQ, etc.).
- The NEPA compliance activities will be conducted in accordance with Section 2.4 of this Report.
- Document review for primary and secondary documents will be in accordance with Section 2.2 of this Report.
- Activities in this document make certain assumptions regarding the allocations of funding from DOE. If full funding is not received, some activities may be delayed.
- If extensions are granted by the IAG agencies to increase the duration of the public comment period, all following activities will be appropriately extended.

3.0 SCHEDULES

The schedules presented here incorporate the applicable FFA schedule requirements, established EPA Guideline items, and the BNL workflow consideration (see Section 2.0 and 2.1). Section 3.1 shows the proposed schedules for the OUs and the Removal Action AOCs defined in Table 1-2, which will be initiated or continued in FY22 or FY23.

3.1 SCHEDULE FOR PROJECTS INITIATED OR CONTINUED IN FY22 OR FY23

Operable Units and Removal Action AOCs scheduled to be initiated or continued in FY22 or FY23, along with their associated deliverables and their proposed date in which they are due to the EPA and the NYSDEC for review, are attached.

3.2 STATUS OF PROJECTS SINCE PREVIOUS ANNUAL SCHEDULES UPDATE/REPORT

OPERABLE UNITS

Operable Unit I –The Petition for Closure of the VOC Groundwater Treatment System was approved by the regulators in 2019. In February 2021, groundwater model natural attenuation simulations were updated based on the latest temporary well Sr-90 data collected in 2020 downgradient of the FHWMF source area. The simulation shows that Sr-90 reaches the site boundary in the middle of the Upper Glacial aquifer at a concentration of approximately 20 pCi/L in 2080. The results are similar to those from the modeling simulation performed in 2015.

Operable Unit III – A summary of the changes made to these systems since November 2020 is as follows:

- Middle Road: The system continued operation with extraction wells RW-2, RW-3, and RW-7 operational, and RW-1, RW-4, RW-5, and RW-6 in standby mode. VOCs in several monitoring wells are not declining at a rate that will definitively achieve the cleanup goal by 2030. As a result, three vertical profile wells (VPs) were installed in August 2021 to confirm distribution of VOC concentrations to help evaluate the need for additional extraction well(s).
- South Boundary: Extraction well EW-17 continued full-time operation and EW-4 was shut down and placed in standby mode in October 2021. Extraction wells EW-3, EW-5, EW-6, EW-7, EW-8 and EW-12 remained in standby mode. VOCs in a monitoring well located between the Middle Road and South Boundary Treatment Systems is not declining at a rate that will definitively achieve the cleanup goal by 2030. As a result, two VPs were installed in August 2021 to confirm distribution of VOC concentrations to help evaluate the need for an additional extraction well.
- Western South Boundary: Extraction wells WSB-1, WSB-3, WSB-4, WSB-5 and WSB-6 continued full-time operation and WSB-2 remained in standby mode.
- Industrial Park: Extraction wells UVB-1 through UVB-7, EW-8 and EW-9 remained in standby mode. In February 2021, three monitoring wells that were formerly sampled under the Industrial Park East monitoring program were abandoned due to pending development of the private property that they were located on. Discussion continued with the new property owner regarding access to the remediation infrastructure.

- Industrial Park East: This system has been decommissioned. The facility, including the carbon vessels, controls, discharge piping, and injection wells are being used to support remediation of the deeper Industrial Park VOC plume.
- North Street: The Petition for Closure of the system was approved by the regulators in 2020.
- North Street East: The original VOC treatment system was administratively closed for its originally designed purpose as documented in the 2019 Groundwater Status Report. A formal petition for closure was not issued for this system since the infrastructure is being used for remediation of the ethylene dibromide (EDB) plume. Two additional extraction wells (NSE-EDB-EW3 and NSE-EDB-EW-4) were installed and became operational in July 2020 to remediate the EDB plume in this area. The water is treated at the existing North Street East treatment system.
- LIPA/Airport: Airport extraction wells RTW-2A, RTW-3A and RTW-5A remained in standby mode. Extraction wells RTW-1A, RTW-4A, and RTW-6A continued full time operation. LIPA extraction wells EW-1L, EW-2L, EW-3L and EW-4L remained in standby mode.
- HFBR Pump and Recharge: The Petition for Closure of the System was approved by the regulators in 2019.
- Building 96: Extraction well RTW-1 continued full-time operation and RTW-2, RTW-3 and RTW-4 remained in standby mode.
- Sr-90 Chemical Holes: The system remained in standby mode.
- Sr-90 BGRR/WCF: The system continued full-time operation with extraction wells SR-1, SR-2, SR-3 and SR-9. Extraction well SR-8 continued pulsed pumping (one month on and one month off). Extraction wells SR-4, SR-5, SR-6, and SR-7 were in standby mode.
- Building 452 Freon-11: The Petition for Closure of the System was approved by the regulators in 2019.

Operable Unit V – On January 6, 2021, NYSDEC approved closure of the Peconic River Permit Equivalency for vegetation monitoring at the PR-WC-06 sediment cleanup area. Monitoring and control of invasive species in this area will continue to meet federal surveillance duration requirements. A fish population survey of the Peconic River was performed in May 2021 and resulted in the capture of nine small chain pickerel from the onsite portions of the Peconic River. The type and size of fish were far below what was necessary under the Data Quality Objective to support sampling. In response to a January 2021 request by the NYSDEC, DOE recommended sampling of fish for mercury and PCBs in on-site portions of the Peconic River as part of the site environmental surveillance monitoring program. This will include:

- Human Health: Filets analyzed for radionuclides, mercury, and PCBs
- Ecological: Small whole fish for mercury and PCBs

Fish sampling will be limited to times when river conditions allow adequate size, number, and fish mobility to ensure results accurately represent risk levels to human health and the environment. Details of the sampling plan will be documented in an updated Peconic River Fish Surveillance Monitoring Data Quality Objective.

Operable Unit VI - The system continued full-time operation with both extraction wells (EW-1E and EW-2E). Between March and July 2021, six VPs were installed for the purpose of obtaining updated geologic information as well as groundwater quality data. EDB was identified at greater depths in the Upper Glacial aquifer than originally expected. The maximum EDB concentration detected in these VPs was 1.41 µg/L at 158 feet below grade, a depth which is

significantly below the capture zone of the extraction wells. Three monitoring wells were also installed in July 2021. Geologic data indicates that the Gardiners Clay unit is not present beneath the southern portion of this plume as was previously understood. Updated groundwater modeling results will help determine the location and depth of additional extraction wells required to re-establish complete plume capture and achievement of ROD cleanup goals.

Operable Unit VIII - The status of characterization activities for 1,4-dioxane and Per- and Polyfluoroalkyl Substances (PFAS) since November 2020 are as follows:

- In February 2021, BNL identified two new areas of concern (AOCs 33 and 34) for PFOS/PFOA and 1,4-dioxane that will be managed under a new operable unit (OU VIII). DOE outlined the process and milestones for addressing the Current and Former Firehouse PFOS/PFOA source area groundwater remediation as a Time Critical Removal Action (TCRA) under CERCLA.
- A detailed characterization effort was conducted in 2020 and early 2021 of the high concentration segments of the PFAS plumes associated with BNL's Current and Former Firehouse facilities. The data were used to delineate the plumes downgradient of these source areas and aid in the design of two groundwater treatment systems at these areas.
- The TCRA Source Area Remediation Design Report and Action Memo were submitted to the regulators in June 2021 and subsequently approved.
- Field work involving the installation of extraction wells, monitoring wells, non-potable water piping, electric and carbon filters was initiated in August 2021.
- Continued installation of temporary wells to help characterize the extent of the plume.
- Completed installation of 12 monitoring wells in the southwest portion of the BNL site in September 2021 to better define groundwater flow directions within source water contributing area of the Suffolk County Water Authority William Floyd Parkway Wellfield. Three of the 12 wells will serve a dual purpose as outpost groundwater monitoring wells for the wellfield.

BGRR – Surveillance and maintenance continued with quarterly inspections of the high bay and former offices, the annual inspection of the engineered cap in December 2020, the annual below ground ducts inspection in June 2021 and the annual structural and roof inspection in November 2021. There were no significant issues identified during the inspections. Inspections of the below ground ducts was changed from semi-annual to annual starting in 2021 due to little change to the condition of the ducts since 2012, very little water accumulation and continuous monitoring that would alarm if any significant water accumulation were to occur in the ducts. Maintenance and repairs were performed throughout the year including sealing of cracks in the engineered cap, replacement of the leak detection sensor in the south cooler in the below ground ducts, repair to a hole in the rollup door on the west side of Building 701, a section of soffit and several sections of the siding that had rotted out on one of the dog houses was replaced. Participated in a BNL 500-A environmental review meeting for a proposed science research project that will include equipment and structures on the BGRR roof.

HFBR – All quarterly inspections of the facility (Bldg. 750) and grounds were performed in 2021. The annual structural/roof inspection was completed in November 2021 and there were no significant issues identified. Maintenance and repairs to the HFBR were performed throughout the year including removal of several small areas of potential asbestos on the floor as well as posting these and several other areas indicating that there is a potential for Asbestos

Containing Material, repair to the cracks and holes above the generator room door and collection and disposal of stack paint chips on the ground outside the stack construction zone.

The following activities have been performed for the stack demolition project since November 2020:

- Weekly stack demolition coordination teleconferences with Brookhaven Science Associates (BSA), DOE, the U.S. Army Corps of Engineers (USACE), and the demolition contractor were held.
- DOE, USACE and the contractor briefed the regulators on the status of the demolition project during the monthly IAG teleconferences.
- DOE, USACE and the contractor presented the status of the demolition project to the Community Advisory Council (CAC) in March, April, September and November 2021. The Brookhaven Executive Roundtable (BER) was also briefed in June and October 2021.
- Responsibility for managing the stack drain tank was transitioned from BNL to the stack removal contractor in August 2020.
- The CAMP air monitoring data was provided to NYSDEC/NYSDOH weekly through September 2021.
- DOE submitted a milestone extension request to EPA June 7, 2021 to request additional time to complete demolition of the stack with field work to be complete in September 2021 and submit the Draft Closeout Report by December 31, 2021. EPA approved the request on July 14, 2021.
- Demolition of the stack was accomplished between December 2020 and February 2021.
- Soil excavation, subgrade structure removal, stack pedestal decontamination, waste shipment, final status survey including ORISE independent verification, backfilling and site restoration were completed by September 2021.
- The draft Closeout Report, including the Final Status Survey Report will be submitted to the regulators for review in December 2021.

The HFBR ROD also lays out a plan for the long-term segmentation, removal, and disposal of the remaining HFBR structures, systems, and components (including the reactor vessel and thermal and biological shields). These long-term actions will be conducted following a safe storage period (not to exceed 65 years) to allow for the natural reduction of high radiation levels to a point where conventional demolition techniques can be used to dismantle these reactor components. In August 2020, radiation measurements of the V-14 port on top of the reactor vessel were conducted to confirm that radioactive decay is occurring at the modeled rate. This information was presented in the 2021 Five Year Review.

Waste Concentration Facility – Cleanup of radiological-contaminated soil at the former Waste Concentration Facility is complete. Following resolution of comments, the final Closeout Report was issued to the regulators in September 2019.

Building 650 Reclamation Facility and Decontamination Facility/Hot Laundry - From October 2020 through June 2021, Building 650 underwent removal of radiologically-contaminated source terms such as piping, ductwork and equipment, followed by demolition of the building and excavation of radiologically-contaminated soil. A final status survey was completed in July 2021 and the excavation was backfilled and seeded in August. Following off-

site waste disposal, a Closeout Report will be submitted to the regulators.

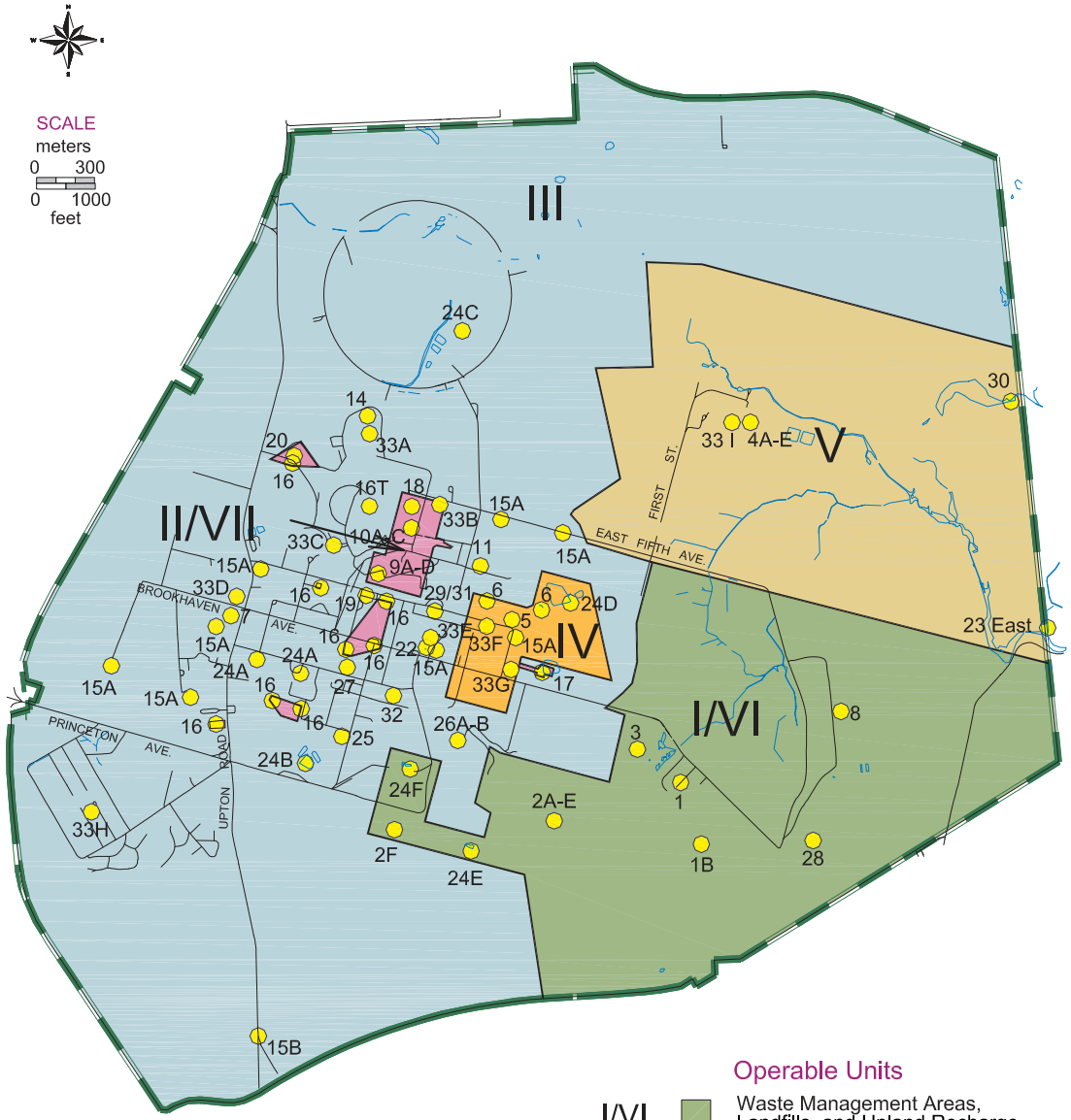
g-2 Tritium Plume/BLIP ROD – The annual BNL Environmental Monitoring Plan identifies the groundwater monitoring activities for the plume. The Quarterly and Annual Groundwater Status Reports present the groundwater monitoring results for the permanent wells. In February 2021, the annual g-2 and BLIP cap inspection certification letter was submitted to the regulators.

At the BLIP source area, tritium concentrations in groundwater have been less than the 20,000 pCi/L maximum contaminant level (MCL) since early 2006.

At the g-2 source area, tritium continues to be detected in semi-annual samples at concentrations above the MCL, with concentrations of less than 55,000 pCi/L since April 2012.

Land Use Controls – Over the past year, no activities have been observed at BNL that have impacted the protectiveness of the cleanup remedies. The institutional controls that were evaluated include adherence with procedures, reviews of fact sheets and maps that identify specific controls and restrictions, and field inspections to assess the effectiveness of institutional controls for each area. These controls are described and documented in an annual letter report that was issued to the regulators in February 2021. Starting in 2013, the annual letter report also included the g-2 and BLIP cap inspection, and a summary of the S&M activities and certification of the effectiveness of institutional controls at the BGRR and HFBR. In October 2021, new fact sheets and maps were established for the Former Firehouse (Sub-Area of Concern 33E) and Current Firehouse (Sub-Area of Concern 33F) to maintain institutional control over PFAS-contaminated groundwater and soil.

Five Year Review – The fourth site-wide Five Year Review was submitted to the regulators June 8, 2021 for review and they were briefed on the recommendations on July 26, 2021. On August 6, 2021, EPA provided their protectiveness determination letter. Responses to EPA, NYSDEC/NYSDOH and SCDHS comments on the Five Year Review are being prepared and will be presented to the regulators as an Addendum to the Five Year Review Report. The CAC were briefed on the significant recommendations in the Five Year Review on November 10, 2021.



Operable Units

I/VI		Waste Management Areas, Landfills, and Upland Recharge
II/VII		Alternating Gradient Synchrotron, Scrapyard, and Aerial Survey
III		Potable and Supply Wells and Spills
IV		Central Steam Facility
V		Sewage Treatment Plant
VIII	(Not shown)	PFOS, PFOA and 1,4-Dioxane

Operable Units and Areas of Concern

Areas of Concern

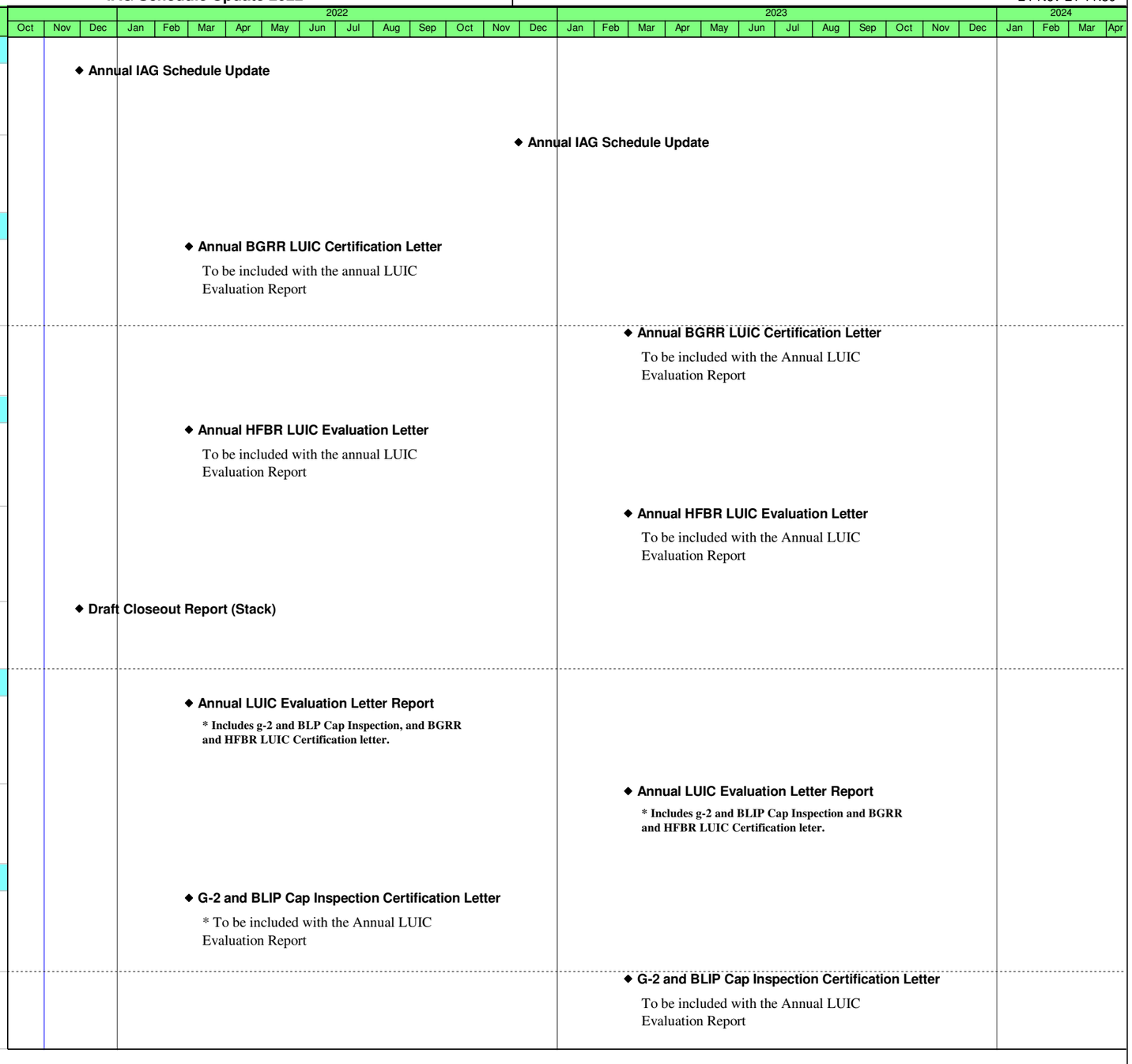
1	Hazardous Waste Management Facility
1B	Groundwater
2A-E	Former/Interim Landfills, Slit Trench, and Chemical/Animal/Glass Holes
2F	Ash Pit
3	Current Landfill
4A-E	Sewage Treatment Plant (A - Sludge Drying Beds; B - Sand Filter Beds; C - Imhoff Tanks; D - Hold-Up Ponds; E - Satellite Disposal Area)
5	Central Steam Facility
6	Building 650 Sump and Sump Outfall Area
7	Paint Shop
8	Upland Recharge/Meadow Marsh
9A-D	Brookhaven Graphite Research Reactor (A - BGRR Canal; B - Underground Ductwork; C - Spill Sites; D- Pile Fan Sump)
10A-C	(A - Tanks D1, D2, D3; B – Underground Pipelines; C- Six A/B USTs)
11	Building 830 Pipe Leak
12	Underground Storage Tanks (not shown)
13	Cesspools and Septic Tanks (not shown)
14	Bubble Chamber Spill Area
15A	Potable/Supply Wells
15B	Monitoring Well 130-02
16A-S	Aerial Radioactive Monitoring System Results
16T	g-2 Source Area and Tritium Groundwater Plume
17	Area Adjacent to Former Low-Mass Criticality Facility
18	AGS Storage Yards
19	TCE Spill Area
20	Particle Beam Dump, North End of Linear Accelerator
21	Leaking Sewer Pipes (not shown)
22	Old Firehouse
23 East	Eastern Tritium Plume
24A	Process Supply Wells 104, 105
24B	Recharge Basin HP
24C	Recharge Basin HN
24D	Recharge Basin HO
24E	Recharge Basin HS
24F	Weaver Drive Basin HW
25	Heavy Machine Shop (Building 479)
26A-B	Warehouse Area (A - Building 208; B - Former Scrapyard/Drum Storage Area South of Building 96)
27	Building 464 Mercury Contaminated Soil
28	EDB Plume
29	HFBR Spent Fuel Pool and Tritium Plume
30	Peconic River
31	HFBR
32	Building 452 Freon-11
33A-I	PFOS and PFOA Groundwater and Soil Contamination
34	1,4- Dioxane Groundwater Contamination (Not Shown)

Brookhaven National Laboratory

Environmental Information Management System
JRH - 11/23/21

Figure 1

Activity ID	Activity Name	Start
Annual Schedule Update		
IAG0010	Annual IAG Schedule Update	30-Nov-21*
IAG0020	Annual IAG Schedule Update	30-Nov-22*
Brookhaven Graphite Research Reactor		
IAG0030	Annual BGRR LUIC Certification Letter	01-Mar-22*
IAG0040	Annual BGRR LUIC Certification Letter	01-Mar-23*
High Flux Beam Reactor		
IAG0070	Annual HFBR LUIC Evaluation Letter	01-Mar-22*
IAG0080	Annual HFBR LUIC Evaluation Letter	01-Mar-23*
IAG0090	Draft Closeout Report (Stack)	01-Dec-21*
Land Use and Institutional Controls		
IAG0100	Annual LUIC Evaluation Letter Report	01-Mar-22*
IAG0110	Annual LUIC Evaluation Letter Report	01-Mar-23*
Tritium Plume Remediation		
IAG0120	G-2 and BLIP Cap Inspection Certification Letter	01-Mar-22*
IAG0130	G-2 and BLIP Cap Inspection Certification Letter	01-Mar-23*



Activity ID	Activity Name	Start
Groundwater Status Report		
IAGA130	Draft 2021 Groundwater Status Report	15-Jun-22*
IAGA140	Draft 2022 Groundwater Status Report	15-Jun-23*
Landfills		
IAGA160	2021 Annual Landfills Report	15-Mar-22*
IAGA170	2022 Annual Landfills Report	15-Mar-23*
BNL Site Environmental Report		
IAGA180	2020 Site Environmental Report	28-Sep-21 A
IAGA190	2021 Site Environmental Report	03-Oct-22*
IAGA200	2022 Site Environmental Report	02-Oct-23*
PFAS Groundwater Treatment Time Critical Removal Action		
IAGA210	Draft Treatment Systems Start-up Report	30-Nov-22*
Operable Unit VIII		
IAGA220	Draft RI Work Plan	01-May-23*